

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-22 (cancelled)

23 (new): A system comprising a sensor and a monitor for sensing at least one physiological characteristic of a patient, the sensor being connectable to a monitor that estimates a physiological characteristic from signals detected by the sensor, the sensor comprising:

- a detector for detecting the signals from the patient which are indicative of the physiological characteristic;
- a memory connected with the sensor, said memory being physically located on one of a sensor body, sensor cable, sensor connecting plug or a sensor adapter module, and said memory being configured to store data defining at least one sensor signal specification boundary for the detected signals, the sensor signal specification boundary being indicative of a quality of the signals and an accuracy of the physiological characteristic estimated from the signals by the monitor, wherein the sensor signal specification boundary includes limits for an AC modulation component and DC component of the signals; and
- means for providing access to the memory to allow transmission of the data defining the at least one sensor boundary to the monitor,
- wherein the monitor determines to display or not display the estimate of the physiological characteristic based on the signals and their relationship relative to a plurality of sensor signal specification boundaries and to a plurality of monitor boundaries preprogrammed into the monitor.

24 (new): The system of claim 23, wherein the monitor computes calculated values, having AC and DC components, from the signals, wherein the sensor signal specification boundary constitutes limits on the AC and DC components of the calculated values, and wherein

4 the AC and DC components are dependent on either a physiological status of the patient, sensor
5 type, or sensor location.

1 25 (new): The system of claim 23, wherein the signals detected from the patient
2 include first and second sets of signals derived from detected light scattered from the patient, the
3 light having first and second wavelengths, the signals derived from detected light each having an
4 AC modulation component and a DC component, and the sensor signal specification boundary
5 including limits on the AC and DC components.

1 26 (new): The system of claim 25, wherein the signals derived from detected
2 light are indicative of an arterial oxygen saturation of the patient.

1 27 (new): The system of claim 23, wherein the memory comprises a digital
2 memory configured to store a digital representation of the at least one sensor signal specification
3 boundary, and wherein the physiological characteristic is arterial oxygen saturation.

1 28. A monitor for providing an indication of an accuracy of an estimated
2 physiological condition of a patient, the monitor being connectable to a sensor that detects
3 signals indicative of at least one physiological characteristic of the patient, the monitor
4 comprising:

5 a receiving circuit configured to receive the signals indicative of the at least one
6 physiological characteristic from the sensor and data defining at least one sensor signal
7 specification boundary for the detected signals from the sensor, the sensor signal specification
8 boundary being indicative of a quality of the signals detected by the sensor and an accuracy of
9 the physiological characteristic estimated from the detected signals, wherein the at least one
10 sensor boundary is indicative of a transition between a signal regime considered normal for the
11 sensor in its usual application and a signal regime considered to be abnormal;

12 a processing circuit configured to estimate the physiological condition of the
13 patient based on the received signals, compare the received signals against the at least one sensor
14 boundary, and generate the indication of the accuracy of the estimated physiological condition,

15 wherein the processing circuit is further configured to determine whether the received signals are
16 within the normal regime or the abnormal regime; and
17 means for providing the indication of the accuracy of the estimated physiological
18 condition to a user of the monitor,
19 wherein said processing circuit determines to display or not display the estimate
20 of the physiological characteristic based on the signals and their relationship relative to a
21 plurality of sensor signal specification boundaries and to a plurality of monitor boundaries
22 preprogrammed into the monitor.

1 29 (new): The monitor of claim 28, wherein said normal regime is one in which
2 the sensor is likely to be properly applied to the patient and said abnormal regime is one in which
3 the sensor may have partially or entirely come off the patient.

1 30 (new): The monitor of claim 28 wherein the processing circuit is further
2 configured to compute an indication of whether the sensor is likely to be applied to the patient or
3 has partially or entirely came off the patient.

1 31 (new): A system comprising a sensor and a monitor for sensing at least one
2 physiological characteristic of a patient, the sensor being connectable to a monitor that estimates
3 the physiological characteristic from signals detected by the sensor, the sensor comprising:
4 a detector for detecting the signals from the patient which are indicative of the
5 physiological characteristic;
6 a memory connected with the sensor, said memory being physically located on
7 one of a sensor body, sensor cable, sensor connecting plug or a sensor adapter module, and said
8 memory being configured to store data defining at least one sensor signal specification boundary
9 for the detected signals, the sensor signal specification boundary being indicative of a transition
10 between a signal regime considered normal for the sensor in its usual application, and a signal
11 regime considered to be abnormal, in which said sensor signal specification boundary is
12 characteristic of a model of the sensor, and said boundary is characteristic of individual
13 components used in making the sensor; and

14 means for providing access to the memory to allow transmission of the data
15 defining the at least one sensor boundary to the monitor,
16 wherein the monitor determines to display or not display the estimate of the
17 physiological characteristic based on the signals and their relationship relative to a plurality of
18 sensor signal specification boundaries and to a plurality of monitor boundaries preprogrammed
19 into the monitor.

1 32 (new): The system of claim 31 wherein the monitor is a pulse oximetry
2 monitor having means to determine whether the signals are within said normal regime or said
3 abnormal regime; and means for informing a user of the system as to whether the signal is
4 normal or abnormal.

1 33 (new): The system of claim 32 wherein said means for informing the user is
2 an alarm that is triggered when the signal moves from said normal regime to said abnormal
3 regime.

1 34 (new): The system of claim 32, wherein said normal regime is one in which
2 the sensor is likely to be properly applied to the patient and said abnormal regime is one in which
3 the sensor may have partially or entirely come off the patient.